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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/686,810	10/17/2003	Michael-Rainer Busch	095309.52838US	8785

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CROWELL & MORING LLP
INTELLECTUAL PROPERTY GROUP
P.O. BOX 14300
WASHINGTON, DC 20044-4300

EXAMINER

MCCALL, ERIC SCOTT

ART UNIT	PAPER NUMBER
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2855

DATE MAILED: 05/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/686,810

Applicant(s)

BUSCH ET AL.

Examiner

Eric S. McCall

Art Unit

2855

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 February 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 and 29-38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 7-9, 29-31 and 35-37 is/are rejected.
- 7) ☒ Claim(s) 4-6, 10, 32-34 and 38 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>10/17/2003</u> . | 6) <input type="checkbox"/> Other: _____ |

**DEVICE AND METHOD FOR DETERMINING THE STATE OF
AGEING OF AN EXHAUST-GAS CATALYTIC CONVERTER**

FIRST OFFICE ACTION ON THE MERITS

In response to the Applicant's amendment dated Feb. 14, 2005.

CLAIMS

35 U.S.C. § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-3, 7-9, 29-31, and 35-37 are rejected under 35 U.S.C. 102(e) as being anticipated by Iwazaki et al. (2003/0005746).

With respect to claim 1, Iwazaki et al. suggest an oxygen sensor having an oxygen-sensitive region for measuring an oxygen partial pressure in the exhaust gas and being connected to an electronic control unit, wherein the oxygen sensor has a temperature-sensitive region and can be actuated by the control unit in such a manner that at least one of a temperature measurement and an oxygen partial pressure measurement can be carried out (see page 3, paragraph 33).

The Examiner notes that the preamble of claim 1 has not been given patentable weight because the body of the claim does not rely upon the preamble thereof for completeness. Thus, a device “for determining a state of ageing of an exhaust-gas catalytic converter arranged in an exhaust pipe of an internal combustion engine, having an oxygen sensor which is arranged in the exhaust pipe and is assigned to the exhaust-gas catalytic converter” has not been given patentable weight.

With respect to claim 2, Iwazaki et al. suggest the temperature-sensitive region of the oxygen sensor being formed by the oxygen-sensitive region and being a solid electrolyte (page 1, paragraph 6).

With respect to claim 3, Iwazaki et al. suggest the temperature-sensitive region of the oxygen sensor being a heating conductor structure (page 7, paragraph 102).

With respect to claims 7-9, Iwazaki et al. suggest the oxygen sensor (20) being arranged in the exhaust pipe downstream of the exhaust-gas catalytic converter (18), and a second oxygen sensor (19) is arranged in the exhaust pipe upstream of the exhaust-gas catalytic converter (see Fig. 3).

With respect to claim 29, Iwazaki et al. suggest an apparatus comprising:
an oxygen sensor disposed in the exhaust pipe, the oxygen sensor having an oxygen-sensitive region for detecting an oxygen partial pressure in the exhaust gas and a temperature-sensitive region for detecting a temperature of the exhaust gas (page 3, paragraph 33); and
a control unit adapted to receive signals from the oxygen sensor corresponding to a detected oxygen partial pressure and a detected exhaust gas temperature,
wherein the control unit determines at least one of the exhaust gas temperature and the oxygen partial pressure from at least one of the oxygen sensor signals (page 3, paragraph 33).

The Examiner notes that the preamble of claim 29 has not been given patentable weight because the body of the claim does not rely upon the preamble thereof for completeness. Thus, an apparatus “for determining a state of ageing of an exhaust-gas catalytic converter arranged in an exhaust pipe of an internal combustion engine” has not been given patentable weight.

With respect to claim 30, Iwazaki et al. suggest the temperature-sensitive region and the oxygen-sensitive region being formed from a single region of a solid electrolyte (page 1, paragraph 6).

With respect to claim 31, Iwazaki et al. suggest the temperature-sensitive region of the oxygen sensor being a heating conductor structure (page 7, paragraph 102).

With respect to claims 35-37, Iwazaki et al. suggest a second oxygen sensor (19) disposed in the exhaust pipe upstream of the catalytic converter (18), wherein the first oxygen sensor (20) is disposed in the exhaust pipe downstream of the catalytic converter (Fig. 3).

Allowable Subject Matter

Claims 4-6, 10, 32-34, and 38 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 4-6 (and thus claim 10) have been found to be allowable over the prior art because the prior art fails to teach or suggest a temperature probe provided in the exhaust pipe in relation to the oxygen sensor and the catalytic converter as claimed, in combination with the other limitations as claimed.

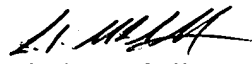
Claims 32-34 (and thus claim 38) have been found to be allowable over the prior art because the prior art fails to teach or suggest a temperature probe provided in the exhaust pipe in combination with a region of the catalytic converter located between the oxygen sensor and the temperature probe.

CONTACT INFORMATION

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Eric S. McCall whose telephone number is (571) 272-2183.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Eric S. McCall
Primary Examiner
Art Unit 2855
April 28, 2005